



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/080,517	05/18/1998	CHANDRASEKHAR NARAYANASWAMI	Y0998-095	9487

7590 07/01/2003

FRANK CHAU  
1900 HEPMSTEAD TURNPIKE  
SUITE 501  
EAST MEADOW, NY 11554

EXAMINER

TILLERY, RASHAWN N

ART UNIT PAPER NUMBER

2612

DATE MAILED: 07/01/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/080,517	NARAYANASWAMI ET AL.
	Examiner	Art Unit
	Rashawn N Tillery	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 15 April 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Response to Arguments***

Applicant's arguments filed April 15, 2003 have been fully considered but they are not persuasive.

Regarding Applicant's arguments concerning the combination of Friedman and Yamadaji failing to disclose Applicant's claimed invention, the examiner respectfully disagrees.

Friedman explicitly teaches, in col. 9, lines 8-28, authenticating "textual information" about the image in the border of the image so as to better aid in "legal authentication." It is further taught, in col. 9, lines 29-37, that Friedman's method of authenticating images "completely mitigates the new threats of computer-assisted alteration of digital image files and eliminates the threat of deception by attaching or substituting false captions or other information recorded in the border." Thus, the examiner contends, given Yamadaji's teachings of watermarking textual data for purposes of security, that it would not have been a huge leap for one of ordinary skill in the art to watermark Friedman's parameters into the border of the image.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 4-5, 7-8, 12-14, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman (US5499294) in view of Yamadaji (US6192138).

Regarding claim 1, Friedman discloses, in figure 4, an image capturing system (10) for automatically recording and authenticating a plurality of parameters (see col. 9, lines 8-28 where the various parameters are discussed) in a captured image, comprising:

a central processing unit (12) for controlling a plurality of functions and operations of the system;

image capture means (11), operatively connected to the central processing unit, for generating a digital image of an observed image frame and for generating a plurality of image data associated with the generation of the image;

wireless communication means (GPS receiver; range finder 13), operatively connected to the central processing unit, for receiving object data from objects in the observed image frame when the image is generated, the object data comprising identification information (the examiner contends that Friedman's acoustic or infrared

signals transmitted by the range finder can be interpreted to read on Applicant's "object data" since the transmitted signals "identify" data from the object);

geographic location determining means (GPS receiver), operatively connected to the central processing unit, for determining geographic coordinates of the system when the digital image is generated;

means for determining a time and a date when the image is generated (see figure 4 where the time and date is shown);

information receiving means (see col. 3, lines 1-11 where the digital code is discussed), operatively connected to the central processing unit, for receiving user data associated with a user of the system when the digital image is generated, the user data comprising user identification information (the examiner contends that Friedman's serial number which is attached to an image and "associated" with the user can be interpreted to read on Applicant's "user data");

image processing means (12) for receiving the plurality of parameters and recording the plurality of parameters with the generated digital image, the plurality of parameters including the plurality of image data, the object data, the time data, the date data, the location data and the user data; and

Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files (see col. 9, lines 29-37).

Friedman does not expressly disclose means for watermarking a plurality of parameters into an image. Yamadaji reveals that it is well known in the art to invisibly

watermark an image with textual data (see col. 8, lines 51-67 where storing of the text data is discussed).

Yamadaji teaches watermarking compressed image data. A photograph is first taken of the image data and then of the “digital watermark,” which could either be a logo mark, trademark or character (see col. 8, lines 11-39). Then, the compressed watermark data is embedded into the compressed image data. It would have been obvious to one of ordinary skill in the art at the time the invention was made for Friedman to watermark the parameters into the image as well as record them. One would have been motivated to do so in an effort to safeguard the images against malicious manipulations while also protecting the proprietary rights by maintaining the integrity of the image content.

Regarding claim 4, see claim 1 above.

Regarding claim 5, see claim 1 above

Regarding claim 7, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Friedman does not expressly disclose an image compression means. Yamadaji teaches that it is well known in the art to compress an image before watermarking the image (see examiner’s notes above). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Yamadaji’s teachings. It would have been advantageous since the image verification and stamping can be achieved directly from processing on JPEG compressed image without having to first

decompress the compressed image and then verify the content (see col. 13, lines 52-60).

Regarding claim 8, see claim 7 above.

Regarding claim 12, Friedman discloses, in figure 4, image data associated with the generation of the image, including f/stop, shutter speed and distance of the lens at the time of exposure (note, since applicant's claim language is written in the alternative, not all of the claims limitations must be met).

Regarding claim 13, see claim 1 above.

Regarding claim 14, see claim 1 above.

Regarding claim 17, see claim 7 above.

Regarding claim 21, Friedman discloses receiving and recording object data from an object in an observed image frame when the image is generated, the object data comprising object identification information (see col. 4, lines 27-37 where it is discussed that an image file can be stored in an internal memory or transmitted directly to processing; also see col. 9, lines 11-13 where it is discussed that the textual data is generated at the time of capture)

2. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman in view of Yamadaji in further view of Tanaka et al (US5335072).

Regarding claim 10, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Yamadaji teaches watermarking an image to ensure that the content of the image has not been altered using an image verification process. Neither Friedman nor

Yamadaji explicitly disclose a means for receiving one of verbal data and verbal commands.

Tanaka reveals that it is well known in the art to utilize a microphone for picking up voices of a photographer, persons to be photographed and other voices (see col. 4, lines 49-59; note: since Applicant's claim language is written in the alternative, Examiner will only address "means for receiving verbal data"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Tanaka's teachings since the use of a microphone is notoriously associated with cameras.

Regarding claim 11, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Yamadaji teaches watermarking an image to ensure that the content of the image has not been altered using an image verification process. Neither Friedman nor Yamadaji explicitly disclose manually determining the location of the system.

Tanaka reveals that it is well known in the art to store GPS data while in areas where it is impossible to receive GPS signals from satellites (see col. 8, lines 10-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Tanaka's teachings. One would have been motivated to do so in an effort to store positional data when GPS signals are out of range.

3. Claims 2-3, 6, 15-16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman in view of Yamadaji.

Regarding claims 2 and 3, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Yamadaji teaches watermarking an image to ensure that the content of the image has not been altered using an image verification process. Neither Friedman nor Yamadaji explicitly disclose specifying or determining which of the plurality of parameters should be recorded or watermarked in the image. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allot user more control over the recorded and watermarked data.

Regarding claim 6, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Yamadaji teaches watermarking an image to ensure that the content of the image has not been altered using an image verification process. Neither Friedman nor Yamadaji explicitly disclose preventing the watermarking of the images if an image quality of the image is altered above a threshold. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made since it would be a waste of time and money to watermark a damaged/unclear image.

Regarding claims 15 and 16, see claims 2 and 3 above.

Regarding claim 18, see claims 1 and 2 above.

Regarding claim 19, see claim 5 above.

Regarding claim 20, see claim 18 above.

Regarding claim 22, see claim 21 above.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman in view of Yamadaji in further view of Murphy et al (US5799082).

Regarding claim 9, Friedman teaches a method for verifying the authenticity of a digital image using public and private keys to eliminate threats of alteration of digital files. Yamadaji teaches watermarking an image to ensure that the content of the image has not been altered using an image verification process. Neither Friedman nor Yamadaji explicitly disclose an orientation determining means. Murphy teaches that it is well known in the art to determine angular orientation and embed that information into a digital image (see the Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Murphy's teachings of authenticating a digital image with positional data. This would allow the user to provide more information concerning the image.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

RNT  
June 26, 2003

*Wendy*  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600